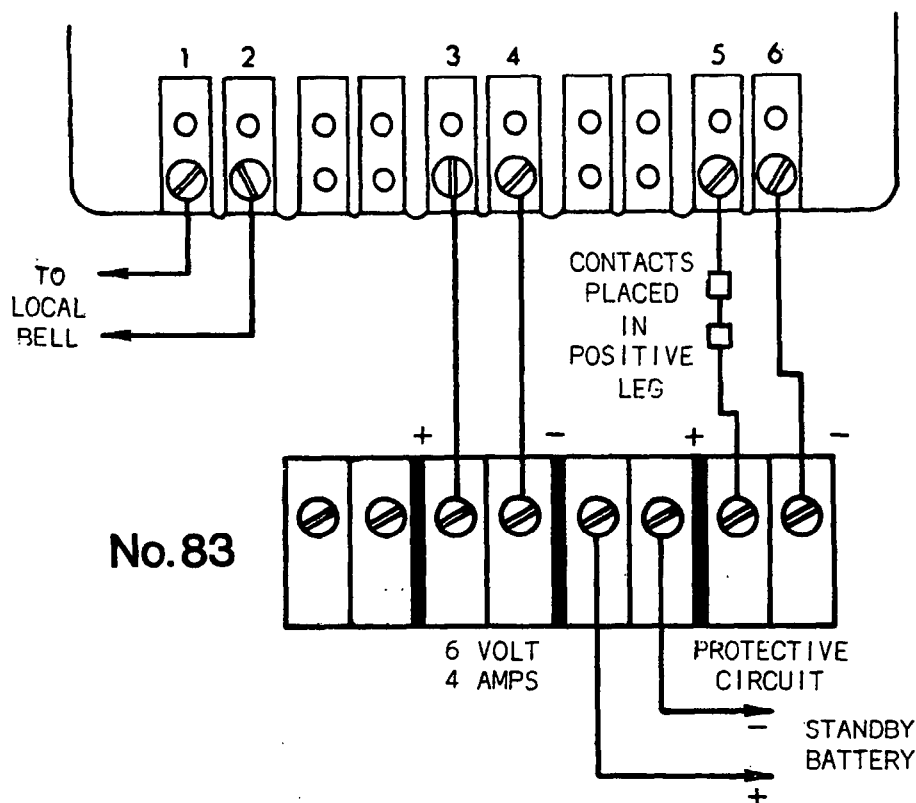


No.83 ENERGY PACK

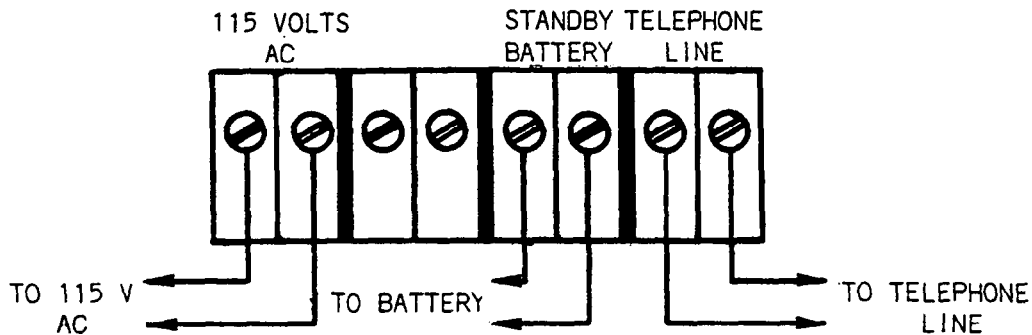
CONTROL INSTRUMENT - 1000 SERIES (TYPICAL)



1. Place the Energy Pack in the Control Instrument Cabinet. Connect 2 wires from the bell battery terminals on the Instrument board, to the 2 terminals marked, "6 Volts, 4 Amps". Use No. 16 wire or larger. When necessary, the Energy Pack can be kept up to 15 feet away from the Instrument Cabinet, providing No. 14 wires are used to connect to the Instrument.
2. Plug the supplied A.C. line cord into a 24 hour, 110 Volt A.C. source.
3. When standby battery power is desired, place a 6 Volt battery in cabinet next to the pack and connect it to the terminals marked, "Standby Battery". Observe Polarity. Use No. 16 wire or larger.
4. Start the protective circuit loop at the Energy pack terminals marked "Protective Circuit". Use a No. 20-2 twisted pair, or any other 2 conductor wire of your choice. Run the wire to all the openings installing the contacts in the positive leg. At the last contact, return the wire to the Instrument Cabinet and connect it to the protective terminals on the instrument board.

NOTE: The Ademco No. 83 power supply uses a special, non-interchangeable fuse, for your protection. This is the Ademco No. 90-7 1/2 amp slow-blow fuse.

No. 89-24 ENERGY PACK



Energy Pack 89-24 supplies power for telephone line circuits and provides completely adjustable voltage from 0 to 24 Volts. It is not suitable for bell ringing circuits, as the current is deliberately limited to protect telephone lines.

To install the No. 89-24, follow these steps in order. Step 3 may be omitted if standby battery is not required.

1. Before connecting any wires, remove chrome plug and by means of a screwdriver, turn the voltage adjusting control fully counterclockwise.
2. Connect the proper terminals in the control instrument or central office relay to the terminals marked "TELEPHONE LINES".
3. If standby battery is desired, add sufficient batteries so that the proper current flows over the line.
4. Connect the terminals marked "115 volts A.C." to a reliable 110-120 volt A.C. source. The voltage at the telephone line terminals will now be zero.
5. Slowly turn the control clockwise until the proper current flows over the telephone line. All Ademco Modularms, Mini-modularms and the No. 121 Police Alarm strips require 4 Milliamperes of current flowing over telephone line. When the voltage adjusting control is properly adjusted, the meter on the No. 130 Modularm plug-in unit at headquarters will read in the green area. For specific recommendations on adjustment procedure, see "No. 89-24 ADJUSTMENT PROCEDURE" found on page 21 of Section N in this manual.

Note: Unless the above procedure is followed, damage is sure to result to components, as excessive current may flow over the line.

NOTE: The No. 83, 89, 89-12 and 89-24, usually have a plastic protective cover over the aluminum housing. This may be removed once unit has been installed. Also these power supplies must have dry cells as a standby source in the event of an A.C. power failure.

TROUBLESHOOTING Nos. 83, 89, 89-12, 89-24

TROUBLE: 1. CONTINUOUS OPERATION ON STANDBY BATTERY.

PROBABLE CAUSE

- A. Burned out fuse.
- B. Open rectifier, transformer, or relay coil.

REMEDY

- A. Replace fuse using 3/8 ampere Slo-Blo Ademco No. 90 (for No. 83 Energy Pack use No. 90-7 .5 ampere Slo-Blo).
- B. Return to factory for repair.

TROUBLE: 2. UNIT FAILS TO SWITCH TO STANDBY WHEN AC POWER FAILS.

PROBABLE CAUSE

- A. Dirty contacts on switch-over relay.
- B. Weak standby battery.

REMEDY

- A. Clean contacts of relay (use No. 317 and/or No. 316 contact cleaner and burnishing tool to clean contacts).
- B. Replace battery.

TROUBLE: 3. FUSES KEEP BURNING OUT (NOS. 83, 89, 89-12).

PROBABLE CAUSE

Short on bell line connected to "6 VOLT - 4 AMP" terminals (12 VOLT terminals - No. 89-12).

REMEDY

Repair shorted bell circuit wires. See Part 1 of this manual, Section G, for troubleshooting information.

TROUBLE: 4. FAULTY OPERATION OF NO. 89-24.

PROBABLE CAUSE

Lightning striking the telephone lines may have done damage to the transformer and/or diodes.

REMEDY

Unit must be returned for repair. To protect against future lightning damage, install a No. 255 Lightning Arrestor across the telephone lines.

TROUBLE: 5. RED LIGHT ON FRONT OF POWER PACK FAILS TO LIGHT.

PROBABLE CAUSE

- A. No AC power.
- B. Burned out bulb or fuse.

REMEDY

- A. Restore AC power.
- B. Remove standby battery; if power is still available from Energy Pack, bulb is burned out; replace with Ademco No. 8074. Otherwise change fuse (Ademco No. 90 3/8 amp, Slo-Blo for Nos. 89, 89-12 and 89-24; Ademco No. 90-7, 1/2 amp Slo-Blo for No. 83).